

amendment had been entered (if any) and which were unresponsive (not entered). Telephone calls to Group 1700 and discussions with PTO Examiners James Seldnak and Rabon Sargent on March 2, 2001 confirmed that a complete substitute amendment was an appropriate response.

An Exhibit A is included to check that all of Examiner Sargent's concerns in the Official Action dated January 2, 2001 have been addressed.

No new matter has been added to the application.

We now turn to the specific rejections.

CONTINUING STATUS

The Examiner states that:

"Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification (37 CFR 1.78)."

Applicants have added the suggested text to page 1 of the specification to overcome this requirement.

Therefore this objection has been overcome and should be withdrawn.

REJECTION OF CLAIMS 16, 25 AND 27 UNDER 35 U.S.C. 101 and 112 (2nd Paragraph)

Claims 16, 25, and 27 are rejected under 35 U.S.C. 101 and 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner states that:

"A use cannot be considered to be a statutory class of invention."

"If applicants intend to claim a process of using, then the claims are indefinite because they fail to recite definitive process steps."

Applicants have extensively amended the claims and the use term has been removed.

Therefore this rejection has been overcome.

Reconsideration and withdrawal is respectfully requested.

REJECTION OF CLAIMS 1-28 UNDER 35 U.S.C. 112 (2nd)

Claims 1-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner states that:

“Firstly, the terminology, “usual additives,” of claim 1 renders indefinite, because the terminology is subjective.

Secondly, the terminology, “as well as,” of claim 1 renders the claims indefinite. The examiner suggests “and”.

Lastly, it is unclear what is meant by “substantially halogen-free”. Exactly how does “substantially halogen-free” differ from “halogen-free”?”

Applicants respectfully traverse this rejection.

These claims have been amended as suggested by the Examiner. Therefore, these rejections have been overcome.

Reconsideration and withdrawal is respectfully requested.

REJECTION OF CLAIMS 2-9 AND 18-23 UNDER 35 U.S.C. 112 (2nd)

Claims 2-9 and 18-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner states that:

“Firstly, the amendment to claim 2 is unclear, because the first bracket is missing. Also, claims 2 and 22 are not grammatically correct.

Secondly, with respect to claims 7, 8, and 21, it is unclear how the polybutadiene relates to the prepolymer. Does the prepolymer contain the polybutadiene?

Thirdly, no basis for each of the claimed weight percent values has been provided within claims 7, 9, 21 and 22.”

Applicants respectfully traverse this rejection.

These claims have been amended as suggested by the Examiner.

The composition optionally contains liquid polybutadiene.

The text of originally filed Claims 7 and 9 is now added with minor modification to the specification.

Therefore, these rejections have been overcome.

Reconsideration and withdrawal is respectfully requested.

REJECTION OF CLAIMS 2-6 AND 19 UNDER 35 U.S.C. 112 (2nd)

Claims 2-6 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner states that:

“Within claims 2, 3, 5 and 19, it is unclear how the respective components are “based” on the recited species. The use of “based” renders the claims indefinite.”

Applicants respectfully traverse this rejection.

These claims have been amended as suggested by the Examiner. Therefore, these rejections have been overcome.

Reconsideration and withdrawal is respectfully requested.

REJECTION OF CLAIMS 4, 5 and 18-20 UNDER 35 U.S.C. 112 (1st)

Claims 4, 5, and 18-20 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The Examiner states that:

“The claims fail to recite the type of molecular weight (i.e., number average, weight average, etc.); therefore, one of ordinary skill could not adequately determine the properties of the polyols or how to duplicate them.”

RESPONSE: One of skill in the art could use the specification text to select the polymer from commercial sources. Thus, the type of molecular weight basis is therefore known. Applicants will provide more detail shortly.

“Since Claim 5 is a multiple dependent claim, the subject matter of Claims 5 (when dependent on 4) and 19 is objected to as being identical.”

Applicants respectfully traverse this rejection.

These claims have been amended as suggested by the Examiner. Therefore, these rejections have been overcome.

Reconsideration and withdrawal is respectfully requested.

REJECTION OF CLAIMS 7, 8, 12, 13, 21 and 26 UNDER 37 CFR 1.75 (c)

Claims 7, 8, 12, 13, 21 and 26 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

The Examiner states that:

“Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In view of the language, “consists of”, within claim 1, the position is taken that applicants’ claims are closed to the inclusion of additional components; therefore, the materials of the aforementioned claims are excluded and, as a result, the claims fail to be further limiting.”

Applicants respectfully traverse this rejection.

These claims have been amended as suggested by the Examiner. Therefore, these rejections have been overcome.

Reconsideration and withdrawal is respectfully requested.

REJECTION OF CLAIMS 5, 11, 19 and 24 UNDER 35 U.S.C. 112 (2nd)

Claims 5, 11, 19 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner state that:

“Firstly, within claims 5 and 19, the significance of the word, “native”, is unclear.

Secondly, the use of the language, “preferably” and “in particular”, renders the claims indefinite, because it cannot be determined if or to what extent the language modifies the preceding language.

These terms have been deleted and this rejection is overcome.

REJECTION OF CLAIM 28 UNDER 35 U.S.C. 112 (2nd)

Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner states that:

The language, "the composition", lacks antecedent basis. Furthermore, there is no requirement that the can contains the prepolymer composition; the claim is simply drawn to a can."

Applicants respectfully traverse this rejection.

These claims have been amended as suggested by the Examiner. The terms have been modified or deleted. Therefore, this rejection has been overcome.

Reconsideration and withdrawal is respectfully requested.

REJECTION OF CLAIMS 1-28 UNDER 35 U.S.C. 112 (1st)

Claims 1-28 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The Examiner states that:

"It is not clear what "1C", "1.5C", and "2C" refers to, as presented within the specification. Furthermore, "1C" is present within claims 17 and 28."

Applicants respectfully traverse this rejection.

These claims have been amended as suggested by the Examiner. The 1C and 2C refer to one component or two component prepolymers. 1.5C refers to transitional compositions. Therefore, these rejections have been overcome.

Reconsideration and withdrawal is respectfully requested.

DOUBLE PATENTING

The Examiner states that:

"Claims 1-28 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 16-37 of copending Application No.

09/058,901. Although the conflicting claims are not identical, they are not patentably distinct from each other because each set of claims is drawn to a prepolymer composition having equivalent NCO contents and overlapping components. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented."

When claims are allowed, Applicants will file a terminal disclaimer if it is needed.

JOINT INVENTORS

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Applicants will examine inventorship as needed.

REJECTION OF CLAIMS 1-5, 9-19 and 25-28 UNDER 35 U.S.C. 103 (a)

Claims 1-5, 9-19 and 22-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pauls (4,263,412) in view of Falkenstein et al. ('313).

The Examiner states that:

"Pauls discloses a storage stable polyurethane prepolymer composition, having an NCO content of 5 to 25 percent by weight, which may be dispensed from a pressure can to yield a dimensionally stable foam. See abstract and columns 2-4.

Pauls is silent regarding the use of the phosphorous containing compounds as softeners; however, the use of such compounds within polyurethane foam formulations was known at the time of the invention. Falkenstein et al. teach at column 3, lines 59-66 that the use of phosphorous containing compounds soften the foam and increase flame resistance.

Therefore, one of ordinary skill in the art would have been motivated to utilize the claimed phosphorous containing compounds within the Pauls composition, so as to obtain a foam having both decreased brittleness (increased softness) and improved flame resistance. The fact that the compounds function in a dual capacity provides further motivation for their use."

Applicants respectfully traverse this rejection.

Paul ('412) never teaches or suggests the use of phosphorous containing compounds in these polyurethane polymers. It fails as a primary reference.

The Examiner is in error concerning Falkenstein ('313). The Falkenstein reference, though concerned with prepolymers, differs significantly from the present invention. The foams produced there are polyisocyanurate foams. Such foams are normally not produced from pressurized cans, but in a commercial plant from tanks by mixing the components in the spray head. Polyisocyanurate foams are based on a trimerization reaction of isocyanate groups using special catalysts, whereas the polyurethane foams of the present invention are based on the reaction of isocyanate groups with a hydroxy compound. The prepolymer compositions therefore need different catalysts, and the polymeric foams obtained therefrom have different characteristics and fields of application.

Why one would one of skill in the art combine these teachings to produce the present invention? Applicants argue they would not. One reference describes polyurethane and the other describes polyisocyanurate foams. There is no teaching or suggestion in either reference of the existence of the other. The "obvious-to-try" standard is not a proper standard for 35 U.S.C. 103.

Therefore this rejection has been overcome.

Recommendation and withdrawal of this rejection is respectfully requested.

REJECTION OF CLAIMS 6-8, 20 and 21 UNDER 35 U.S.C. 103 (a)

Claims 6-8, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pauls ('412) in view of Falkenstein et al. ('313) as applied to claims 1-5, 9-19 and 22-28 above, and further in view of Friedman ('827) and either Nichols et al. ('646) or Burkhart et al. ('270 or '566).

"As aforementioned within paragraphs 18-20, the combined teachings of Pauls and Falkenstein et al. are considered to render the use of phosphorous containing softening agents within pressure can dispensable polyurethane prepolymers *prima facie* obvious; however, the references are silent regarding the specific use of phosphorous containing polyols and polybutadienes. Friedman teaches the use of phosphorous containing polyols to provide flame resistance to polyurethanes and Nicols et al. disclose at column 1, lines 33-35 the use of polybutadienes as cell opening agents for polyurethane foams. The polybutadienes of Nicols et al. are considered to include liquids, because patentees refer to them as bleeding out, giving the foam an oily feel, at column 1, lines 50 and 51. Furthermore, Burkhart et al. disclose the use of liquid polybutadienes as molds release agent and cell opening agents. See abstracts.

Therefore, one of ordinary skill in the art seeking a pressure can dispensable prepolymer capable of yielding a foam of improved softness, flame resistance, and dimensional stability would have been motivated to utilize the flame retarding phosphorous polyols of Friedman and the polybutadienes of Nicols et al. or Burkhart et al. with the teachings of Pauls and Falkenstein et al., so as to arrive at the instant invention.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

The references were cited and supplied to applicants during prosecution of the parent application.”

Applicants respectfully traverse this rejection.

The Examiner rejected just above Claims 1, 3, 7-17 and 21-21-29 under U.S.C. 103(a) as being unpatentable over Pauls ('412) in view of Falkenstein et al ('313) and now adds Friedman ('827) and Burkhart et al ('270 or '566) citing each reference for its individual teaching and then combining them alleging that a “prima facia” cases of obviousness has been made.

The arguments above for Pauls and Falkenstein are incorporated herein by references.

The Examiner has cited each of the references for its specific teaching as listed above and except that:

Friedman teaches that his phosphorus containing compounds must have reactive hydroxyl groups which react to incorporate the Phosphous containing group into the polyurethane matrix. This is unlike Applicant's invention of non-reactive phosphorous contain fire retardant compounds.

The Burkhart et al. '566 is not prior art to Applicants' invention due to Applicants foreign filing date. The filed certified translation of the foreign application is in the parent application and can be transferred. A copy is also enclosed. The Examiner's statements of these last two references individual teachings are essentially correct.

Applicant respectfully urges that the Examiner's position that has made a valid prima facia case of obviousness is in error.

Although the cases cited by examiner hold that it is prima facia obvious to use a compound for its known function as the examiner has stated in each of In re Hinter, 173USPO356 and In re Dial et al. 140 USPQ244 those references specifically suggested combining the claimed elements.

In Applicant case there is no such suggestion in any of the cited references that all of the elements of applicants novel combination could be combined. It has been held in Custom Accessories Inc. v Jeffrey-Allan Industries, Inc. 1 U.S..PQ.2d 1196 (Fed. Cir. 1986) that “casting an invention as ‘a combination of old elements’ leads improperly to an analysis of the claimed invention by the parts, not by the whole. The critical inquiry is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination. A traditional problem with focusing on a patent as a combination of old elements is the attendant

notion that patentability is undeserving without some 'synergistic' or 'different' effect. Here, the district court spoke of the need for 'a new and useful result.' Such tests for patentability have been soundly rejected by this court. Though synergism is relevant when present, its 'absence has no place in evaluating the evidence on obviousness.' *Custom Accesories inc. v. Jeffrey-Allan industries, inc.*, 1 U.S.P.Q.2d 1196 (Fed. Cir. 1986)."

The Examiner has therefore not made out a *prima facia* case of obviousness and no comparative data should be required on this record.

In *In re Geiger*, 2 U.S.P.Q. 2d 1276 (Fed. Cir. 1987) it was held that "although the fact that each of the three components of the composition used in the claimed method was conventionally employed in the art for treating cooling water systems, to employ these components in combination for their known functions and to optimize the amount of each additive were not regarded as obvious. Obviousness cannot be established by combining the teachings of the prior art to produce a claimed invention, absent some teaching, suggestion or incentive supporting the combination. At best, in view of the prior art, one skilled in the art might find it obvious to try various combinations of these known scale and corrosion prevention agents. This not the standard of 35 U.S.C. §103. *In re Geiger*, 2 U.S.P.Q.2d 1276 (Fed. Cir. 1987)."

In this case there is no teaching, suggestion or incentive supporting Examiners combination of the cited prior art.

The Examiner has shown no suggested combination of the cited references other than Applicants own specification. An Examiner's obvious-to-experiment standard has been held to be acceptable in *In re Dow Chemical* to 5 U.S.P.Q.2d 1529 Fed. Cir. 1988). That case held that "an obvious-to-experiment standard is not an acceptable alternative for obviousness. Selective hindsight is no more applicable to the design of experiments than it is to the combination of prior-art teachings. There must be a reason or suggestion in the art for selecting the procedure used, other than the knowledge learned from the applicant's disclosure. *In re Dow Chemical Co.*, 5 U.S.P.Q.2d 1529 (Fed. Cir. 1988)."

Thus this case Examiner has failed to make out a *prima facia* case of obviousness on this record, with or without, Burkhart et al ('566)

SUMMARY

Based on the above amendments and arguments, Applicants argue that the present claims are of a form and a scope for allowance. Prompt notification thereof is respectfully requested.

Applicant has amended the claims to overcome the §112 rejections and has shown that Examiner has failed to make out a *prima facia* case of obviousness under §35 U.S.C. 103.

Therefore Applicant respectfully requests that these rejections be withdrawn and that in view with the terminal disclaimer filed in the parent application that this case is in condition for allowance.

Applicants enclose a copy of U.S. 6,054,449 which is a companion to the present technology.

Applicants respectfully request allowance of Claims 1-29 and that this case be passed to issue.

A Petition for Extension of Time and Fee are enclosed.

Applicants will consider any Examiner's amendments which will advance this application to issue.

The Examiner is requested to call the undersigned at (650) 324-1677 with any comments or questions.

Respectfully submitted,



Date: March 2, 2001

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Enclosures:

- Petition for Extension of Time and Fee (2 mo.)
- Hawley's Dictionary Pages
- Copy of Certified Translation from Parent application
- U.S. 6,054,449
- Substitute clean pages for amendments to the specification and the claims

In re Application of

Inventor's Name: Mathias Pauls, et al.

U.S. Serial No.: 09/473,276

U.S. Filing Date: November 10, 1999

Int. Filing Date February 10, 1994

Priority Date Claimed: February 10, 1993

For: PREPOLYMER COMPOSITION FOR
INSULATING FOAMS



EXHIBIT A

The reply filed on October 20, 2000 is not fully responsive.

Due The bases for the weight percents of Claims 9, 21, and 22, as rejected within paragraph 6 of the Office Action, have not been specified.

Due Furthermore, the rejection of "the composition" within Claim 28, set forth within paragraph 12 of the Office Action, has not been addressed.

Due The rejection of Claims 12 and 13 within paragraph 13 of the Office Action has not been addressed.

Due Within the response to the prior art rejection of paragraphs 18-20, applicants have provided arguments that are drawn to the Friedman reference, rather than the relied upon Falkenstein et al. reference.

Due Lastly, applicants have stated that a certified translation of the foreign application has been provided; however, it has not been received by the Office.

The following matters have been noted within applicants' response of October 20, 2000. If not replied to in response to this letter, these matters will be formally addressed in the next Office Action.

Done "Filled" has been spelled incorrectly within Claims 2-6.

Done The amendments, dealing with the "components", to pages 1 and 2 of the specification have not been entered, because of the location of the language does not correspond to the recited line numbers.

Done Within Claims 2, 5, and 19, the prepolymer and polyol are the reaction products of the recited compounds; it is improper to state that they are selected from the compounds.

Done It is unclear how Claim 2 is to be interpreted or how it further limits Claim 1, since Claim 1 specifies that the prepolymer is prepared from polyisocyanates and castor oil.

Done Within Claim 8, the value of the viscosity has been omitted.

Done The first four lines of Claim 1 are unclear, and, within the fourth line, "prepoly component" lacks antecedence.

Done Within the last line of Claim 3, "and" should be "or".

Done Within claims 2-16 and 18-26, applicants' claiming the pressure can and the prepolymer composition is confusing.

Done Within Claims 17 and 28, applicants have referred to the prepolymer composition of Claims 1 or 15; however, Claims 1 and 15 are drawn to the pressure filled can and prepolymer; the claims should be clarified.

Done Lastly, applicants' argument with respect to the identification of the molecular weights of the components is insufficient.